

present in claims 1 and 21. For at least the following reasons, Applicants traverse the objection.

The attention of the Patent Office is drawn to the specification, page 4, lines 25-28, which states:

The present invention provides shaped articles comprising polymeric microbeads which are low-yellowing under exposure to UV light and thermally stable. By low-yellowing, it is meant the change of  $b^*$  value toward yellowness in the CIELAB color space ( $\Delta b^*$ ) is not more than 0.2.

(Emphasis added.) It is clear from this passage that the polymeric beads are low-yellowing, wherein low-yellowing is defined as a change of  $b^*$  value toward yellowness in CIELAB color space of not more than 0.2. To emphasize that it is the microbeads that are low-yellowing, not the shaped articles, Applicants refer to page 4, lines 4-6, wherein the summary of the invention states that:

... the monomers from which the second polymer is derived are selected to provide microbeads that are both low-yellowing and thermally stable.

(Emphasis added.) The summary further states at page 4, lines 8-9, that:

The article contains microbeads that exhibit improved resistance to yellowing while maintaining thermal stability.

(Emphasis added.) As shown from the above excerpts from the specification as filed, it is the microbeads that provide resistance to yellowing. The amendments to claims 1, 21, and 42, which were made on February 4, 2004, and May 26, 2004, are fully supported by the specification as filed. No new matter has been added to the specification or claims. Reconsideration and withdrawal of the objection are in order, and are respectfully requested.

35 USC § 112, first paragraph

Claims 1, 21 and 42 have been rejected under 35 USC § 112, first paragraph, for failing to comply with the written description requirement by allegedly including subject matter not described in the specification so as to convey Applicants were in possession of the claimed invention at the time of filing. Specifically, the Patent Office asserts the recitation in the claims that “the microbeads have a change in  $b^*$  value that falls within the claimed range” is not supported in the specification. Applicants traverse the rejection as follows.

The Patent Office asserts that the “specification refers only to the change in  $b^*$  value of the claimed ‘continuous first polymer phase having dispersed therein microbeads of a cross-linked second polymer.’” See page 3 of the Office Action. It is not indicated where in the specification the quote cited by the Patent Office can be found. Applicants point to the specification at page 4, lines 4-9 and 25-28, presented elsewhere herein, as support for the claimed language that “the microbeads have a change in CIELAB value  $b^*$  towards yellowness on exposure to UV light, wherein the change in  $b^*$  is less than or equal to 0.2.”

Applicants’ further refute the statement of the Patent Office on page 4 of the Office Action that:

[t]he original set of claims does not recite that solely the microbeads have a change in  $b^*$  value that falls within the claimed range (original claim 20 recites that the “article of claim 1” has a change in  $b^*$  value that that falls within the claimed range),...

Claims 1 and 20 as originally filed state:

1. A shaped article comprising a continuous first polymer phase having dispersed therein microbeads of a cross-linked second polymer, which microbeads are bordered by void space, wherein the monomers from which the second polymer is derived are selected to provide microbeads that are both low-yellowing and thermally stable.

20. The article of claim 1 wherein the  $\Delta b^*$  for one week simulated high intensity sunlight (50 Klux) testing is not more than 0.2.

(Emphasis added.) As seen in originally filed claim 1, it is the microbeads that are low-yellowing, not the article. Claim 20 depends from claim 1, and, as such, appropriately begins with the phrase “[t]he article of claim 1” as is standard patent claiming practice. The use of the introductory phrase “the article of claim 1” refers only to dependency of claim 20 from claim 1, and does not anywhere state that the change in  $b^*$  refers to the article. By standard claiming practice, the change in  $b^*$  would refer back to the first use of “ $b^*$ ” in claim 1. Admittedly, “ $b^*$ ” as used in claim 20 lacks antecedent basis. However, one skilled in the art would recognize  $b^*$  as referring to yellowness, and, in the absence of any other antecedent basis, would read claim 20 as defining the “low-yellowing” of the microbeads of claim 1.

For at least the reasons set forth herein, Applicants submit the amendments to claims 1, 21, and 42 in the past two amendments do not constitute new matter and are fully supported in the specification as filed, particularly page 4 and the claims as filed, for example, claim 1. Reconsideration and withdrawal of the rejection under 35 USC § 112, first paragraph, are in order, and are respectfully requested.

35 USC § 103(a) over Maier et al. in view of Narita et al.

Claims 1, 2, 5, 7, 9-19, 21, 22, 24-26 and 28-39 have been rejected under 35 USC § 103(a) over Maier et al. in view of Narita et al. Claims 8 and 27 have been rejected under 35 USC § 103(a) over Maier et al. in view of Narita et al., and further in view of Saito et al. Claim 40 has been rejected under 35 USC § 103(a) over Maier et al. in view of Narita et al., and further in view of Hart et al. For at least the following reasons, Applicants traverse each and every rejection.

It is admitted by the Patent Office at page 4 of the Office Action mailed March 29, 2004, (cited by the current Office Action) that Maier et al. “fail to explicitly teach that the microbeads have a change in CIELAB value b\* towards yellowness on exposure to UV light wherein the change in b\* is less than or equal to 0.2.” This feature is set forth in independent claims 1, and 21, from which all other rejected claims depend.

Narita et al. is relied on for a teaching of a receptor layer of a dye diffusion thermal transfer dye receiving sheet, wherein the b\* value of the sheet “is tailored to be from -5 to 5.” It is reported at page 4 of the Office Action mailed March 29, 2004, that the tailoring of the b\* value is accomplished by incorporating coloring materials into the receiving sheet, as taught in Narita et al. at col. 10, lines 36-44. While Narita et al. does teach incorporating coloring materials into the dye receptor layer of the receiver to adjust the coloring of the receiver, for example, to match the coloring of a corresponding printing paper for proofing purposes (col. 10, lines 39-44), there is no teaching, disclosure, or suggestion in Narita et al. of incorporating microbeads resistant to yellowing into the dye receptor layer to control yellowing. Narita et al. teaches a powdery composition comprising a dyeable resin, and that may further include a white pigment (col. 9, lines 13-20), wherein the use of the composition to form a dye receptor layer results in a dye receptor layer having a value b\* between -5 and 5

(see col. 10, lines 45-49). Narita et al. does not teach, disclose, or suggest the use of microbeads to control coloring, and does not disclose microbeads having a change in CIELAB value  $b^*$  less than or equal to 0.2 towards yellowness on exposure to UV light. Narita et al. does not teach, disclose, or suggest the use of microbeads as claimed by Applicants, or that including coloring materials within such microbeads can effect the properties of the microbeads, as suggested by the Patent Office. For at least the reasons set forth herein, Narita et al. does not cure the deficiencies of Maier et al.

As set forth herein, neither Maier et al. nor Narita et al. disclose or suggest microbeads that have a change in CIELAB value  $b^*$  towards yellowness on exposure to UV light wherein the change in  $b^*$  is less than or equal to 0.2. Neither of the tertiary references of Saito et al. or Hart et al. disclose or suggest a microbead that undergoes a change in  $b^*$  less than or equal to 0.2 upon exposure to UV light. Thus, none of the references, taken alone or in any combination, disclose or suggest the subject matter of the claimed invention as set forth in any of claims 1, 2, 5, 7-19, 21, 22, and 24-40. Reconsideration and withdrawal of the rejections are in order, and are respectfully requested.

35 USC § 103(a) over Maier et al. in view of Harrison et al.

Claims 42 and 43 have been rejected under 35 USC § 103(a) over Maier et al. in view of Harrison et al. and in further view of Narita et al. For at least the following reasons, Applicants traverse the rejection.

Claim 42, from which claim 43 depends, includes the feature wherein the microbeads have a change in CIELAB value  $b^*$  towards yellowness on exposure to UV light less than or equal to 0.2. As admitted by the Patent Office at page 4 of the Office Action mailed March 29, 2004, Maier et al. “fail to explicitly teach that the microbeads have a change in CIELAB value  $b^*$  towards yellowness on exposure to UV light wherein the change in  $b^*$  is less than or equal to 0.2.” Thus, Maier et al. does not disclose or suggest the claimed invention as set forth in independent claim 42.

Harrison et al. is cited in the Office Action for teaching a dye diffusion thermal transfer dye receiving element “comprising a continuous oriented polymer matrix having dispersed therein microbeads of a cross-linked polymer which are at least partially bordered by void space.” See page 5 of the

Office Action mailed August 4, 2004. Harrison et al. does not disclose or suggest that the microbeads have a change in CIELAB value  $b^*$  towards yellowness on exposure to UV light, wherein the change in  $b^*$  is less than or equal to 0.2. Thus, Harrison et al. does not overcome the deficiencies of Maier et al.

As discussed elsewhere herein, Narita et al. discloses the use of pigments to change coloring of a dye receptor layer such that the dye receptor layer has a value  $b^*$  between -5 and 5 (see col. 10, lines 45-49). Narita et al. does not disclose or suggest microbeads having a change in CIELAB value  $b^*$  towards yellowness on exposure to UV light, wherein the change in  $b^*$  is less than or equal to 0.2. Narita et al. does not cure the deficiencies of Maier et al. or Harrison et al.

For at least the above reasons, none of the references of Maier et al., Harrison et al., or Narita et al., taken alone or in combination, disclose or suggest microbeads having a change in CIELAB value  $b^*$  towards yellowness on exposure to UV light less than or equal to 0.2. Reconsideration and withdrawal of the rejection are in order and are respectfully requested.

For at least the above reasons, Applicants submit all of pending claims 1, 2, 5, 7-19, 21, 22, 24-40, 42, and 43 are in condition for allowance. Prompt action in the form of a Notice of Allowance is earnestly solicited.

Should the Examiner have any questions or require anything further, the Examiner is invited to contact Applicants' undersigned representative.

Respectfully submitted,



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